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| To: | Board of Patent Appeals | | (571) 273-8300 |
| From: | Kevin J. Zilka | | |

Docket No.:   ABE1P003                    **App. No: 10/652,640**

Total Number of Pages Being Transmitted, Including Cover Sheet: 39

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Practitioner's Docket No. ABE1P003                                                      *PATENT*

### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:      John R. Abe

Application No.: 10/652,640                        Group No.: 3639
Filed: 08/28/2003                                  Examiner: Woo, Richard S.
For: METHOD FOR SIMULATING AN OPTIMIZED SUPPLIER IN A MARKET

Mail Stop Appeal Briefs – Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA  22313-1450

### TRANSMITTAL OF APPEAL BRIEF
### (PATENT APPLICATION--37 C.F.R. § 41.37)

1.   This brief is in furtherance of the Notice of Appeal filed 10/25/2005, a substitute for the
     Appeal Brief filed 03/24/2006, and in response to the Notification of Non-Compliant
     Appeal Brief mailed on 06/21/2006.

2.   STATUS OF APPLICANT

     This application is on behalf of a small entity.  A statement was already filed.

---

### CERTIFICATION UNDER 37 C.F.R. §§ 1.8(a) and 1.10*
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*Express Mail certification is optional.)*

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Date. 7/21/2006

Signature

April Skovmand

*(type or print name of person certifying)*

* Only the date of filing (' 1 6) will be the date used in a patent term adjustment calculation, although the date on any certificate of mailing or
transmission under ' 1.8 continues to be taken into account in determining timeliness. See ' 1.703(f). Consider "Express Mail Post Office to
Addressee" (' 1 10) or facsimile transmission (' 1.6(d)) for the reply to be accorded the earliest possible filing date for patent term adjustment
calculations.

Transmittal of Appeal Brief--page 1 of 2

3.    FEE FOR FILING APPEAL BRIEF

Pursuant to 37 C.F.R. §1.17(c), the fee for filing the Appeal Brief has already been paid. However, the Commissioner is authorized to charge any fees that may be due to deposit account 50-1351 (ABE1P003).

4.    EXTENSION OF TERM

The proceedings herein are for a patent application and the provisions of 37 C.F.R. § 1.136 apply.

Applicant(s) believe that no Extension of Time is required; however, if it is determined that such an extension is required, Applicant(s) hereby petition that such an extension be granted and authorize the Commissioner to charge the required fees for an Extension of Time under 37 CFR 1.136 to Deposit Account No. 50-1351.
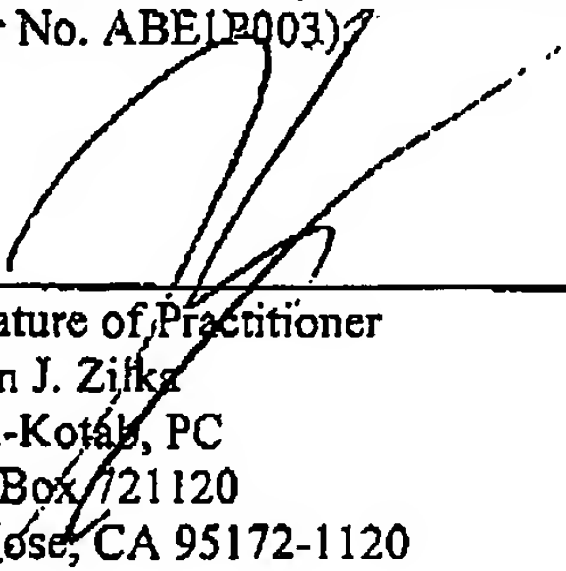
5.    TOTAL FEE DUE

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6.    FEE PAYMENT

If any additional extension and/or fee is required, and if any additional fee for claims is required, charge Deposit Account No. 50-1351 (Order No. ABE1P003).

A duplicate of this transmittal is attached.

Signature of Practitioner
Kevin J. Zilka
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Transmittal of Appeal Brief--page 2 of 2

PAGE 3/38 * RCVD AT 7/21/2006 7:05:13 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-2/6 * DNIS:2738300 * CSID:4089714660 * DURATION (mm-ss):09-14

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Practitioner's Docket No. ABE1P003                                            *PATENT*

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:    John R. Abe

Application No.: 10/652,640                    Group No.: 3639
Filed: 08/28/2003                              Examiner: Woo, Richard S.
For: METHOD FOR SIMULATING AN OPTIMIZED SUPPLIER IN A MARKET

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### (PATENT APPLICATION--37 C.F.R. § 41.37)

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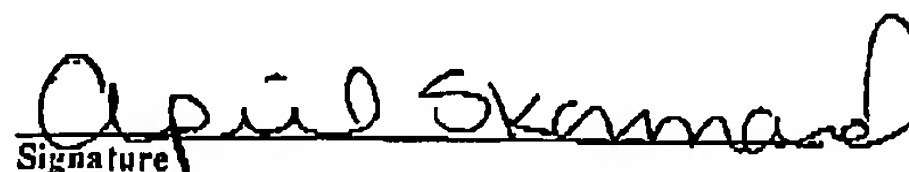| 37 C.F.R. § 1.8(a) | 37 C.F.R. § 1.10* |
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✓ facsimile transmitted to the Patent and Trademark Office, (571) 273 - 8300.

Date: 7/21/2006                    Signature: *April Skovmand*

                                   April Skovmand
                                   *(type or print name of person certifying)*

* Certification date of filing (' 1.6) will be the date used in a patent term adjustment calculation, although the date on any certificate of mailing or transmission under ' 1.8 continues to be taken into account in determining timeliness. See ' 1.703(f). Consider "Express Mail Post Office to Addressee" (' 1.10) or facsimile transmission (' 1.6(d)) for the reply to be accorded the earliest possible filing date for patent term adjustment calculations.

Transmittal of Appeal Brief—page 1 of 2

**3.    FEE FOR FILING APPEAL BRIEF**

Pursuant to 37 C.F.R. §1.17(c), the fee for filing the Appeal Brief has already been paid.  However, the Commissioner is authorized to charge any fees that may be due to deposit account 50-1351 (ABE1P003).

**4.    EXTENSION OF TERM.**

The proceedings herein are for a patent application and the provisions of 37 C.F.R. § 1.136 apply.

Applicant(s) believe that no Extension of Time is required; however, if it is determined that such an extension is required, Applicant(s) hereby petition that such an extension be granted and authorize the Commissioner to charge the required fee for an Extension of Time under 37 CFR 1.136 to Deposit Account No. 50-1351.

**5.    TOTAL FEE DUE**

Applicant believes that only the above fee is due in connection with the filing of this paper, because the appeal brief fee was paid with a previous submission.  However, the Commissioner is authorized to charge any additional fees that may be due (e.g. for any reason including, but not limited to fee changes, etc.) to deposit account 50-1351 (Order No. ABE1P003).

**6.    FEE PAYMENT**

If any additional extension and/or fee is required, and if any additional fee for claims is required, charge Deposit Account No. 50-1351 (Order No. ABE1P003).

A duplicate of this transmittal is attached.

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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

| | |
|---|---|
| In re application of: ) | |
| ) | |
| John R. Abe ) | Group Art Unit: 3639 |
| ) | |
| Application No. 10/652,640 ) | Examiner: Woo, Richard Sukyoon |
| ) | |
| Filed: 08/28/2003 ) | Date: 07/21/2006 |
| ) | |
| For: A METHOD FOR SIMULATING AN ) | |
| OPTIMIZED SUPPLIER IN A MARKET ) | |
| ) | |
| _____ ) | |

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**ATTENTION: Board of Patent Appeals and Interferences**

**SUBSTITUTE APPEAL BRIEF (37 C.F.R. § 41.37)**

This brief is in furtherance of the Notice of Appeal filed 10/25/2005, a substitute for the Appeal Brief filed 03/24/2006, and in response to the Notification of Non-Compliant Appeal Brief mailed on 06/21/2006 (see attached). While appellant disagrees with the Examiner as to whether the alleged deficiencies exist in the original Appeal Brief, a Substitute Appeal Brief with appropriate edits is nevertheless submitted to expedite prosecution.

The fees required under § 1.17, and any required petition for extension of time for filing this brief and fees therefor, are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

This brief contains these items under the following headings, and in the order set forth below (37 C.F.R. § 41.37(c)(i)):

I REAL PARTY IN INTEREST
II RELATED APPEALS AND INTERFERENCES
III STATUS OF CLAIMS

The final page of this brief bears the practitioner's signature.

- 3 -

## I  REAL PARTY IN INTEREST (37 C.F.R. § 41.37(c)(1)(i))

The real party in interest in this appeal is John R. Abe.

- 4 -

## II  RELATED APPEALS AND INTERFERENCES (37 C.F.R. § 41.37(c) (1)(ii))

With respect to other prior or pending appeals, interferences, or related judicial proceedings that will directly affect, or be directly affected by, or have a bearing on the Board's decision in the pending appeal, following are potentially related applications in which appeals have been noted.

App. Serial No.: 10/644,949, Filed 08/13/03
App. Serial No.: 10/644,944, Filed 08/13/03

A Related Proceedings Appendix is appended hereto.

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## III   STATUS OF CLAIMS (37 C.F.R. § 41.37(c) (1)(iii))

### A.     TOTAL NUMBER OF CLAIMS IN APPLICATION

Claims in the application are: 1-5 and 15-37

### B.     STATUS OF ALL THE CLAIMS IN APPLICATION

1.     Claims withdrawn from consideration: None

2.     Claims pending: 1-5 and 15-37

3.     Claims allowed: None

4.     Claims rejected: 1-5 and 15-37

5.     Claims cancelled: 6-14

### C.     CLAIMS ON APPEAL

The claims on appeal are: 1-5 and 15-37

See additional status information in the Appendix of Claims.

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**IV STATUS OF AMENDMENTS (37 C.F.R. § 41.37(c)(1)(iv))**

As to the status of any amendment filed subsequent to final rejection, there are no such amendments after final.

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## V SUMMARY OF CLAIMED SUBJECT MATTER (37 C.F.R. § 41.37(c)(1)(v))

With respect to a summary of Claims 1, 17 and 18, as shown in Figures 1-4, a system, method and computer program product are provided for optimal price simulation. In use, a price-frequency mathematical distribution of prices associated with at least one non-optimized supplier is received via an input device of the computer system (e.g. items 302-324 of Figure 3), and the distribution of prices are stored in memory of a computer system. Also received via the input device of the computer system are a number of competitors, a business objective, and a cost associated with a good or service (e.g. items 410, 414 and 416 of Figure 4), and the number of competitors, business objective, and cost associated with the good or service are stored in the memory of the computer system. A set of non-optimized prices are produced based on the distribution of prices, by selecting at least one non-optimized price for each competitor from the distribution of prices, utilizing a processor of the computer system. In addition, an optimal price is calculated based on the selected non-optimized prices, number of competitors, business objective, and cost associated with the good or service, wherein the business objective is selected from the group consisting of maximizing revenue for the good or service, maximizing gross profit for the good or service, maximizing factory utilization for the good or service, maximizing market share for the good or service, and maximizing earnings before income tax (EBIT) for the good or service, utilizing the processor of the computer system. The calculated optimal price for accomplishing the business objective is then displayed via an output device of the computer system. Further, the optimal price is simulated to generate an updated optimal price by identifying a result of utilizing the optimal price, where the result is stored, and a search is performed for the updated optimal price that optimizes a user-selected business objective selected from the group consisting of maximizing revenue for the good or service, maximizing gross profit for the good or service, maximizing factory utilization for the good or service, maximizing market share for the good or service, and maximizing earnings before interest and tax (EBIT) for the good or service, utilizing the processor of the computer system. Still yet, the result includes an expected result, the expected result is compared with an actual result, it is determined whether an optimization is required based on the comparison, and if it is determined that the optimization is required, the updated optimal price is identified. Even still yet, the

updated optimal price is displayed via the output device of the computer system for further accomplishing the business objective. See page 14-16, for example.

With respect to a summary of Claim 15, the above summary of Claims 1, 17 and 18 is incorporated by reference, at least in part. The method is performed by a plurality of components including a frequency distribution engine (e.g. item 118 of Figure 1), a probability of win engine (e.g. item 120 of Figure 1), an expected results engine (e.g. item 122 of Figure 1), an optimization update engine (e.g. item 124 of Figure 1), a bid engine (e.g. item 126 of Figure 1), a market place engine (e.g. item 128 of Figure 1), and a financial accumulator engine (e.g. item 130 of Figure 1). See page 14, line 17-page 15, line 5, for example.

With respect to a summary of Claim 16, the above summary of Claims 1, 17 and 18 is incorporated by reference, at least in part. The method is performed by a plurality of components selected from the group of a frequency distribution engine (e.g. item 118 of Figure 1), a probability of win engine (e.g. item 120 of Figure 1), an expected results engine (e.g. item 122 of Figure 1), an optimization update engine (e.g. item 124 of Figure 1), a bid engine (e.g. item 126 of Figure 1), a market place engine (e.g. item 128 of Figure 1), and a financial accumulator engine (e.g. item 130 of Figure 1). See page 14, line 17-page 15, line 5, for example.

With respect to a summary of Claim 19, the above summary of Claims 1, 17 and 18 is incorporated by reference, at least in part. A graphical user interface (e.g. item 400 of Figure 4) is included for inputting a set of the competitor prices and the number of competitors. See page 16, lines 22-28, for example.

With respect to a summary of Claim 21, the above summary of Claim 19 is incorporated by reference, at least in part. A graphical user interface is included for inputting a value for a cost-per-unit (e.g. item 902 of Figure 9), an error rate (e.g. item 906 of Figure 9), and an optimization update (e.g. item 908 of Figure 9). See page 18, lines 1-7, for example.

With respect to a summary of Claim 22, the above summary of Claim 21 is incorporated by reference, at least in part. The price-frequency mathematical distribution is used to estimate the

set of the competitor prices. See Figures 14-16, and page 19, line 19-page 21, line 4, for example.

With respect to a summary of Claim 23, the above summary of Claim 22 is incorporated by reference, at least in part. The price-frequency mathematical distribution is estimated using the set of competitor prices. See Figures 14-16, and page 19, line 19-page 21, line 4, for example.

With respect to a summary of Claim 24, the above summary of Claim 22 is incorporated by reference, at least in part. The price-frequency mathematical distribution is converted to an expected probability of a customer purchase based on the number of competitors. See Figure 30, and page 26, line 15-page 27, line 4, for example.

With respect to a summary of Claim 25, the above summary of Claim 22 is incorporated by reference, at least in part. The price-frequency mathematical distribution is converted to a table of prices with a frequency of a price within the table corresponding to the price-frequency mathematical distribution. See Figures 62-63, and page 42, line 18-page 43, line 18, for example.

With respect to a summary of Claim 26, the above summary of Claim 25 is incorporated by reference, at least in part. Each price, probability of a customer purchase, and cost-per-unit are used to form a partial income statement for each member of the plurality of prices. See Figures 57-59, and page 39, line 18-page 40, line 25, for example.

With respect to a summary of Claim 27, the above summary of Claim 26 is incorporated by reference, at least in part. Each partial income statement is comprised of financial terms including revenue, cost-of-goods, and gross profit. See Figures 57-59, and page 39, line 18-page 40, line 25, for example.

With respect to a summary of Claim 28, the above summary of Claim 27 is incorporated by reference, at least in part. A set of the partial income statements are stored within a table (e.g. item 5812 of Figure 58). See Figure 58, and page 40, lines 1-16, for example.

- 10 -

With respect to a summary of Claim 29, the above summary of Claims 1, 17 and 18 is incorporated by reference, at least in part. A maximum revenue value and a maximum profit value are identified along with corresponding prices. See Figure 38 and page 31, lines 1-9, for example.

With respect to a summary of Claim 30, the above summary of Claims 1, 17 and 18 is incorporated by reference, at least in part. A probability of a customer purchase is determined for the optimal price. See Figure 43 and page 33, lines 11-25, for example.

With respect to a summary of Claim 31, the above summary of Claims 1, 17 and 18 is incorporated by reference, at least in part. The selection of the prices is performed in a random manner. See Figure 50 and page 36, line 26-page 37, line 13, for example.

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## VI GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL (37 C.F.R. § 41.37(c)(1)(vi))

Following, under each issue listed, is a concise statement setting forth the corresponding ground of rejection.

Issue # 1: The Examiner has rejected Claims 17 and 18 under 35 U.S.C. 101 as being directed toward non-statutory subject matter.

Issue # 2: The Examiner has rejected Claims 1-5, 15-25 and 29-31 under 35 U.S.C. 102(b) as being anticipated by Reuhl et al. (U.S. Patent No. 5,873,069).

Issue # 3: The Examiner has rejected Claims 26-28 and 32-37 under 35 U.S.C. 103(a) as being unpatentable over Reuhl et al. (U.S. Patent No. 5,873,069).

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## VII ARGUMENT (37 C.F.R. § 41.37(c)(1)(vii))

The claims of the groups noted below do not stand or fall together. In the present section, appellant explains why the claims of each group are believed to be separately patentable.

Issue # 1:

The Examiner has rejected Claims 17 and 18 under 35 U.S.C. 101 as being directed toward non-statutory subject matter. Appellant respectfully disagrees with such rejection. Such claims clearly require a "system" and a "computer program product embodied on a computer readable medium," respectively.

Issue # 2:

The Examiner has rejected Claims 1-5, 15-25 and 29-31 under 35 U.S.C. 102(b) as being anticipated by Reuhl et al. (U.S. Patent No. 5,873,069).

*Group #1: Claims 1-5, and 17-21*

With respect to each of the independent claims, the Examiner has relied on Figures 5, 6, 8, 15A-15C, 17-35, and col. 3, line 5- col.4 line 56 to make a prior art showing of appellant's claimed "receiving via an input device of the computer system a price frequency mathematical distribution of prices associated with at least one non-optimized supplier."

Appellant respectfully asserts that there is no disclosure in Reuhl that meets the specific claim language. Specifically, Reuhl fails to specifically mention price frequency mathematical distribution of prices. Appellant notes that simply none of the Figures relied on by the Examiner even suggest a "price frequency mathematical distribution of prices," let alone where such distribution of prices is "associated with at least one non-optimized supplier," as specifically claimed by appellant. Further, simply nowhere in Col. 3, line 5-Col. 4, line 56 is there any disclosure of such specific claim language. Reuhl makes no reference to anything that can be construed as a price frequency mathematical distribution. Therefore, appellant fails to find any disclosure of "receiving a price

frequency mathematical distribution of prices associated with at least one non-optimized supplier," as claimed.

Still with respect to each of the independent claims, the Examiner has used Figure 5 to make a prior art showing of appellant's claimed "storing the distribution of prices in the memory of the computer system." Appellant respectfully points out to the Examiner that "storing the distribution of prices" refers specifically to the price frequency distribution of prices and should not be misconstrued as a list of prices or a "price frequency change pattern," as articulated by Reuhl.

Still yet, with respect to each of the independent claims, the Examiner has relied on the foregoing cited Figures and col. 3 line 5-col. 4 line 56 to make a prior art showing of appellant's claimed "receiving via the input device of the computer system a number of competitors, a business objective, and a cost associated with a good or service" and "storing the number of competitors, business objective, and cost associated with the good or service in the memory of the computer system." Appellant respectfully asserts that Reuhl does not teach a "business objective" either directly or indirectly in the Figures reference by the Examiner, or in the text contained in col. 3 line 5-col. 4, line 56.

Moreover, with respect to each of the independent claims, the Examiner has relied on the foregoing cited Figures, and specifically Figures 15A-15C and 17-35 to make a prior art showing of appellant's claimed technique "wherein the business objective is selected from the group consisting of maximizing revenue for a good or service, maximizing gross profit for the good or service, maximizing factory utilization for the good or service, maximizing market share for the good or service, and maximizing earnings before income tax (EBIT) for the good or service." As noted above, Reuhl does not teach a "business objective," and therefore Reuhl cannot meet appellant's specific claim language.

Also with respect to each of the independent claims, the Examiner has relied on the foregoing cited figures and references in Reuhl to make a prior art showing of appellant's claimed "calculating an optimal price based on the selected non-optimized prices, number of competitors, business objective, and cost associated with the good or service" and "displaying via an output device of the computer system the calculated optimal price for accomplishing the business objective."

- 14 -

Appellant respectful points out to the Examiner that Reuhl fails to teach the computation or calculation of any sort of optimal price based on a business objective. As argued above, Reuhl does not make reference to an optimal price, business objective, or specifically the formation of a business objective with respect to revenue, profits, or any other terms, in the specific manner claimed by appellant. In the absence of an objective, it is not possible for Reuhl to calculate, compute, or display an optimal price, as claimed.

The Examiner is reminded that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. Of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Moreover, the identical invention must be shown in as complete detail as contained in the claim. *Richardson v. Suzuki Motor Co.* 868 F.2d 1226, 1236, 9USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim.

This criterion has simply not been met by the Reuhl reference, for at least the reasons noted above.

*Group #2: Claim 15*

With respect to dependent Claim 15, the Examiner has relied on Figures 2 of Reuhl to make a prior art showing of appellant's claimed technique "wherein the method is performed by a plurality of components including a frequency distribution engine, a probability of win engine, an expected results engine, an optimization update engine, a bid engine, a market place engine, and a financial accumulator engine."

Appellant respectfully points out to the Examiner Reuhl does not teach a frequency distribution engine, a probability of win engine, an expected results engine, an optimization update engine, a bid engine, a market place engine, or a financial accumulator engine in the figures or text. Appellant respectfully asserts that the Reuhl reference simply fails to meet all of appellant's claim language, as noted above.

*Group #3: Claim 16*

With respect to dependent Claim 16, the Examiner has relied on Figures 2 of Reuhl to make a prior art showing of appellant's claimed technique "wherein the method is performed by a plurality of components selected from the group of a frequency distribution engine, a probability of win engine, an expected results engine, an optimization update engine, a bid engine, a market place engine, and a financial accumulator engine."

Appellant respectfully points out to the Examiner Reuhl does not teach a frequency distribution engine, a probability of win engine, an expected results engine, an optimization update engine, a bid engine, a market place engine, or a financial accumulator engine in the figures or text. Again, Appellant respectfully asserts that the Reuhl reference simply fails to meet all of appellant's claim language, as noted above.

*Group #4: Claim 22*

With respect to dependent Claim 22, the Examiner has relied on Figures 15A-15C and 17-35 of Reuhl to make a prior art showing of appellant's claimed technique "wherein the price-frequency mathematical distribution is used to estimate the set of the competitor prices."

Appellant respectfully calls to the attention of the Examiner that Reuhl fails to teach the use of a price-frequency mathematical distribution of prices (see Group #1). In addition, Reuhl does not teach how the price frequency distribution can be used to estimate the set of the competitor prices, as claimed. Appellant respectfully asserts that the Reuhl reference simply fails to meet all of appellant's claim language, as noted above.

*Group #5: Claim 23*

With respect to dependent Claim 23, the Examiner has relied on Figures 15A-15C and 17-35 of Reuhl to make a prior art showing of appellant's claimed technique "wherein the price-frequency mathematical distribution is estimated using the set of competitor prices."

- 16 -

Appellant respectfully calls to the attention of the Examiner that Reuhl fails to teach the use of a price-frequency mathematical distribution of prices (see Group #1). In addition, Reuhl does not teach how the price frequency distribution can be estimated from the set of competitor prices, as claimed. Again, appellant respectfully asserts that the Reuhl reference simply fails to meet all of appellant's claim language, as noted above.

*Group #6: Claim 24*

With respect to dependent Claim 24, the Examiner has relied on Figures 15A-15C and 17-35 of Reuhl to make a prior art showing of appellant's claimed technique "wherein the price-frequency mathematical distribution is converted to an expected probability of a customer purchase based on the number of competitors."

Appellant respectfully calls to the attention of the Examiner that Reuhl fails to teach the use of a price-frequency mathematical distribution of prices (see Group #1). In addition, Reuhl does not teach that a frequency distribution of prices has an associated probability of customer purchase. In fact, Reuhl does not teach the relationship of the probability of customer purchase and price. Again, appellant respectfully asserts that the Reuhl reference simply fails to meet all of appellant's claim language, as noted above.

*Group #7: Claim 25*

With respect to dependent Claim 25, the Examiner has relied on Figures 15A-15C and 17-35 of Reuhl to make a prior art showing of appellant's claimed technique "wherein the price-frequency mathematical distribution is converted to a table of prices with a frequency of a price within the table corresponding to the price-frequency mathematical distribution."

Appellant respectfully calls to the attention of the Examiner that Reuhl fails to teach the use of a price-frequency mathematical distribution of prices (see Group #1). In addition, Reuhl does not teach how the price frequency distribution is converted to a table of prices with a frequency of a price within the table corresponding to the price-frequency mathematical distribution, as

- 17 -

claimed. Again, appellant respectfully asserts that the Reuhl reference simply fails to meet all of appellant's claim language, as noted above.

### Group #8: Claim 29

With respect to dependent Claim 29, the Examiner has relied on Figures 15A-15C and 17-35 of Reuhl to make a prior art showing of appellant's claimed technique "wherein a maximum revenue value and a maximum profit value are identified along with corresponding prices."

Appellant respectfully raises the following argument to the Examiner. Reuhl does not teach the relationship of maximum revenue value or maximum profit value to the corresponding prices. The Examiner is encouraged to recognize that heuristic rules should not be construed to be equivalent to a computational process that mathematically identifies the prices corresponding to the maximum revenue value and maximum profit value.

Appellant respectfully asserts that the Reuhl reference simply fails to meet all of appellant's claim language, as noted above.

### Group #9: Claim 30

With respect to dependent Claim 30, the Examiner has relied on Figures 15A-15C and 17-35 of Reuhl to make a prior art showing of appellant's claimed technique "wherein a probability of a customer purchase is determined for the optimal price."

Appellant respectfully raises the following argument to the Examiner. Reuhl does not teach the computation of optimal price or the association of a probability of purchase with regards to price. The Examiner is encouraged to recognize that heuristic rules should not be construed to be equivalent to a computational process that mathematically identifies the prices corresponding to the maximum revenue value and maximum profit value.

Again, Appellant respectfully asserts that the Reuhl reference simply fails to meet all of appellant's claim language, as noted above.

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*Group #10: Claim 31*

With respect to dependent Claim 31, the Examiner has relied on Figures 15A-15C and 17-35 of Reuhl to make a prior art showing of appellant's claimed technique "wherein a number of selected prices corresponding to the number of competitors is chosen, where the selection of the prices is performed in a random manner."

Appellant respectfully raises the point that Reuhl does not make any disclosure regarding the random selection of prices corresponding to the number of competitors.

Again, Appellant respectfully asserts that the Reuhl reference simply fails to meet all of appellant's claim language, as noted above.

Issue # 3:

The Examiner has rejected Claims 26-28 and 32-37 under 35 U.S.C. 103(a) as being unpatentable over Reuhl et al. (U.S. Patent No. 5,873,069).

*Group #1: Claim 26*

With respect to Claim 26, the Examiner states that "it would have been an obvious matter of design choice to a person of ordinary skill in the art to modify Reuhl et al, such that each price, probability of a customer purchase, and cost-per-unit are used to form a partial income statement for each member of the plurality of prices."

Appellant respectfully, but strongly disagrees with the Examiner. Reuhl does not teach about the relationship of customer purchase probability and price. In fact, the Reuhl makes no mention of the likelihood of customer purchase at a given price and therefore could not possibly teach [nor does Reuhl teach] the formation of a partial income statement associated with each member of a plurality of prices. In contrast, appellant teaches and claims a computational method of deriving a partial income statement associated with each member of a plurality of prices, as well as that

the partial income statement is comprised of financial terms including revenue, cost of goods and gross profit.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on appellant's disclosure. *In re Vaeck,*947 F.2d 488, 20 USPQ2d 1438 (Fed.Cir.1991).

Appellant thus respectfully asserts that at least the third element of the *prima facie* case of obviousness has not been met, since the prior art references, when combined, fail to teach or suggest all of the claim limitations, as noted above.

> *Group #2: Claim 27*

With respect to Claim 27, the Examiner states that "it would have been an obvious matter of design choice to a person of ordinary skill in the art to modify Reuhl et al, such that... each partial income statement is comprised of financial terms including revenue, cost of goods and gross profit."

Appellant again respectfully, but strongly disagrees with the Examiner. Reuhl does not teach about the relationship of customer purchase probability and price. In fact, the Reuhl makes no mention of the likelihood of customer purchase at a given price and therefore could not possibly teach [nor does Reuhl teach] the formation of a partial income statement associated with each member of a plurality of prices. In contrast, appellant teaches and claims a computational method of deriving a partial income statement associated with each member of a plurality of prices, as well as that the partial income statement is comprised of financial terms including revenue, cost of goods and gross profit.

In addition, appellant yet again strongly, but again respectfully disagrees with the Examiner's argument that appellant has not disclosed that utilizing the partial income statement is used for a particular purpose, or solves a stated problem. Appellant identifies how the partial income statement is formed in claim 26, in claim 27 the composition of the income statement is identified to include revenue and gross profit, and claim 29 identifies where the maximum revenue and gross profit values are selected from. Therefore, the use of the partial income statements is to identify the maximum revenue and gross profit values.

Appellant again respectfully asserts that at least the third element of the *prima facie* case of obviousness has not been met, since the prior art references, when combined, fail to teach or suggest all of the claim limitations, as noted above.

> *Group #3: Claim 28*

With respect to Claim 28, the Examiner states that "it would have been an obvious matter of design choice to a person of ordinary skill in the art to modify Reuhl et al, such that... a set of the partial income statements are stored."

Appellant respectfully, but strongly disagrees with the Examiner. Reuhl does not teach about the relationship of customer purchase probability and price. In fact, the Reuhl makes no mention of the likelihood of customer purchase at a given price and therefore could not possibly teach [nor does Reuhl teach] the formation of a partial income statement associated with each member of a plurality of prices. In contrast, appellant teaches a computational method of deriving a partial income statement associated with each member of a plurality of prices, as well as that the partial income statement is comprised of financial terms including revenue, cost of goods and gross profit.

In addition, appellant strongly, but again respectfully disagrees with the Examiner's argument that appellant has not disclosed that utilizing the partial income statement is used for a particular purpose, or solves a stated problem. Appellant identifies how the partial income statement is formed in claim 26, in claim 27 the composition of the income statement is identified to include revenue and gross profit, and claim 29 identifies where the maximum revenue and gross profit

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values are selected from. Therefore the use of the partial income statements is to identify the maximum revenue and gross profit values.

Appellant again respectfully asserts that at least the third element of the *prima facie* case of obviousness has not been met, since the prior art references, when combined, fail to teach or suggest all of the claim limitations, as noted above.

   *Group #4: Claims 32-37*

Appellant respectfully asserts that the subject matter of such claims is deemed novel in view of the arguments made hereinabove with respect to Issue #2, Group #10.

Appellant again respectfully asserts that at least the third element of the *prima facie* case of obviousness has not been met, since the prior art references, when combined, fail to teach or suggest all of the claim limitations, as noted above.

In view of the remarks set forth hereinabove, all of the independent claims are deemed allowable, along with any claims depending therefrom.

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## VIII CLAIMS APPENDIX (37 C.F.R. § 41.37(c)(1)(viii))

The text of the claims involved in the appeal (along with associated status information) is set forth below:

1.  (Previously Presented) A method performed utilizing a computer system, the method comprising:

     receiving via an input device of the computer system a price-frequency mathematical distribution of prices associated with at least one non-optimized supplier;

     storing the distribution of prices in memory of the computer system;

     receiving via the input device of the computer system a number of competitors, a business objective, and a cost associated with a good or service;

     storing the number of competitors, business objective, and cost associated with the good or service in the memory of the computer system;

     producing a set of non-optimized prices based on the distribution of prices, by selecting at least one non-optimized price for each competitor from the distribution of prices, utilizing a processor of the computer system;

     calculating an optimal price based on the selected non-optimized prices, number of competitors, business objective, and cost associated with the good or service, wherein the business objective is selected from the group consisting of maximizing revenue for the good or service, maximizing gross profit for the good or service, maximizing factory utilization for the good or service, maximizing market share for the good or service, and maximizing earnings before income tax (EBIT) for the good or service, utilizing the processor of the computer system;

     displaying via an output device of the computer system the calculated optimal price for accomplishing the business objective;

     simulating the optimal price to generate an updated optimal price by identifying a result of utilizing the optimal price, where the result is stored, and a search is performed for the updated optimal price that optimizes a user-selected business objective selected from the group consisting of maximizing revenue for the good or service, maximizing gross profit for the good or service, maximizing factory utilization for the good or

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service, maximizing market share for the good or service, and maximizing earnings before interest and tax (EBIT) for the good or service, utilizing the processor of the computer system,

where

a) the result includes an expected result,

b) the expected result is compared with an actual result,

c) it is determined whether an optimization is required based on the comparison, and

d) if it is determined that the optimization is required, the updated optimal price is identified; and

displaying via the output device of the computer system the updated optimal price for further accomplishing the business objective.


2.     (Original) A method as recited in claim 1, and further comprising receiving a plurality of sets of one or more prices.


3.     (Original) A method as recited in claim 2, wherein the sets of one or more prices are customizable.


4.     (Original) A method as recited in claim 2, and further comprising comparing the sets of one or more prices.


5.     (Original) A method as recited in claim 4, and further comprising reporting on the comparison.


6. – 14. (Cancelled)


15.    (Original) A method as recited in claim 1, wherein the method is performed by a plurality of components including a frequency distribution engine, a probability of win engine, an expected results engine, an optimization update engine, a bid engine, a market place engine, and a financial accumulator engine.

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16. (Original) A method as recited in claim 1, wherein the method is performed by a plurality of components selected from the group of a frequency distribution engine, a probability of win engine, an expected results engine, an optimization update engine, a bid engine, a market place engine, and a financial accumulator engine.

17. (Previously Presented) An optimal price simulator system, comprising:

logic for receiving via an input device of the computer system a price-frequency mathematical distribution of prices associated with at least one non-optimized supplier;

logic for storing the distribution of prices in memory of the computer system;

logic for receiving via the input device of the computer system a number of competitors, a business objective, and a cost associated with a good or service;

logic for storing the number of competitors, business objective, and cost associated with the good or service in the memory of the computer system;

logic for producing a set of non-optimized prices based on the distribution of prices, by selecting at least one non-optimized price for each competitor from the distribution of prices, utilizing a processor of the computer system;

logic for calculating an optimal price based on the selected non-optimized prices, number of competitors, business objective, and cost associated with the good or service, wherein the business objective is selected from the group consisting of maximizing revenue for the good or service, maximizing gross profit for the good or service, maximizing factory utilization for the good or service, maximizing market share for the good or service, and maximizing earnings before income tax (EBIT) for the good or service, utilizing the processor of the computer system;

logic for displaying via an output device of the computer system the calculated optimal price for accomplishing the business objective;

logic for simulating the optimal price to generate an updated optimal price by identifying a result of utilizing the optimal price, where the result is stored, and a search is performed for the updated optimal price that optimizes a user-selected business objective selected from the group consisting of maximizing revenue for the good or service, maximizing gross profit for the good or service, maximizing factory utilization for the good or service, maximizing market share for the good or service, and maximizing

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earnings before interest and tax (EBIT) for the good or service, utilizing the processor of the computer system,

where

a) the result includes an expected result,

b) the expected result is compared with an actual result,

c) it is determined whether an optimization is required based on the comparison, and

d) if it is determined that the optimization is required, the updated optimal price is identified; and

logic for displaying via the output device of the computer system the updated optimal price for further accomplishing the business objective.

18.     (Previously Presented) A computer program product embodied on a computer readable medium, comprising:

computer code for receiving via an input device of the computer system a price-frequency mathematical distribution of prices associated with at least one non-optimized supplier;

computer code for storing the distribution of prices in memory of the computer system;

computer code for receiving via the input device of the computer system a number of competitors, a business objective, and a cost associated with a good or service;

computer code for storing the number of competitors, business objective, and cost associated with the good or service in the memory of the computer system;

computer code for producing a set of non-optimized prices based on the distribution of prices, by selecting at least one non-optimized price for each competitor from the distribution of prices, utilizing a processor of the computer system;

computer code for calculating an optimal price based on the selected non-optimized prices, number of competitors, business objective, and cost associated with the good or service, wherein the business objective is selected from the group consisting of maximizing revenue for the good or service, maximizing gross profit for the good or service, maximizing factory utilization for the good or service, maximizing market share

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for the good or service, and maximizing earnings before income tax (EBIT) for the good or service, utilizing the processor of the computer system;

computer code for displaying via an output device of the computer system the calculated optimal price for accomplishing the business objective;

computer code for simulating the optimal price to generate an updated optimal price by identifying a result of utilizing the optimal price, where the result is stored, and a search is performed for the updated optimal price that optimizes a user-selected business objective selected from the group consisting of maximizing revenue for the good or service, maximizing gross profit for the good or service, maximizing factory utilization for the good or service, maximizing market share for the good or service, and maximizing earnings before interest and tax (EBIT) for the good or service, utilizing the processor of the computer system,

where

a) the result includes an expected result,

b) the expected result is compared with an actual result,

c) it is determined whether an optimization is required based on the comparison, and

d) if it is determined that the optimization is required, the updated optimal price is identified; and

computer code for displaying via the output device of the computer system the updated optimal price for further accomplishing the business objective.

19. (Previously Presented) A method as recited in claim 1, wherein a graphical user interface is included for inputting a set of the competitor prices and the number of competitors.

20. (Previously Presented) A method as recited in claim 19, wherein the graphical user interface is adapted for inputting the business objective.

21. (Previously Presented) A method as recited in claim 19, wherein a graphical user interface is included for inputting a value for a cost-per-unit, an error rate, and an optimization update.

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22. (Currently Amended) A method as recited in claim 21, wherein the price-frequency mathematical distribution is used to estimate the set of the competitor prices.

23. (Previously Presented) The method as described in claim 22, wherein the price-frequency mathematical distribution is estimated using the set of competitor prices.

24. (Previously Presented) The method as described in claim 22, wherein the price-frequency mathematical distribution is converted to an expected probability of a customer purchase based on the number of competitors.

25. (Previously Presented) A method as recited in claim 22, wherein the price-frequency mathematical distribution is converted to a table of prices with a frequency of a price within the table corresponding to the price-frequency mathematical distribution.

26. (Previously Presented) A method as recited in claim 25, wherein each price, probability of a customer purchase, and cost-per-unit are used to form a partial income statement for each member of the plurality of prices.

27. (Previously Presented) A method as recited in claim 26, wherein each partial income statement is comprised of financial terms including revenue, cost-of-goods, and gross profit.

28. (Previously Presented) A method as recited in claim 27, wherein a set of the partial income statements are stored within a table.

29. (Previously Presented) A method as recited in claim 1, wherein a maximum revenue value and a maximum profit value are identified along with corresponding prices.

30. (Previously Presented) The method as described in claim 1, wherein a probability of a customer purchase is determined for the optimal price.

31.    (Currently Amended) A method as recited in claim 1, wherein a number of selected prices corresponding to the number of competitors is chosen, where the selection of the prices is performed in a random manner.

32.    (Previously Presented) The method as described in claim 31, wherein a lowest price in a set of prices is identified as a winning bid along with a corresponding supplier, the lowest price including the number of randomly selected prices and the optimal price.

33.    (Previously Presented) The method as described in claim 32, wherein the winning bid and the probability of a customer purchase is added to an actual results table comprising of fields identifying a winning supplier, lowest price, cost-per-unit, gross profit, probability of a customer purchase, and actual winrate.

34.    (Previously Presented) The method as described in claims 33, wherein a value for competition is calculated by summing each event of randomly selecting a set of prices corresponding to the number of competitors.

35.    (Previously Presented) A method as recited in claim 34, wherein a value is calculated representing a sum of wins corresponding to the supplier.

36.    (Previously Presented) The method as described in claim 35, wherein the actual winrate is calculated by dividing the sum of wins by the value for competition.

37.    (Previously Presented) The method as described in claim 36, wherein if a condition where the value for competition is equal to or greater than an optimization update window value, and the actual winrate is greater than the expected probability of a customer purchase plus a tolerable error window value, or the actual winrate is less than the probability of a customer purchase minus the tolerable error window value, then the price-frequency mathematical distribution is adjusted so that a new expected probability of a customer purchase is equal to the actual winrate, and recorded values of wins and competition are set to zero.

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## IX EVIDENCE APPENDIX (37 C.F.R. § 41.37(c)(1)(ix))

N/A

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## X RELATED PROCEEDING APPENDIX (37 C.F.R. § 41.37(c)(1)(x))

N/A

In the event a telephone conversation would expedite the prosecution of this application, the Examiner may reach the undersigned at (408) 971-2573. For payment of any additional fees due in connection with the filing of this paper, the Commissioner is authorized to charge such fees to Deposit Account No. 50-1351 (Order No. ABE1P003).

Respectfully submitted,

By: _____                Date: ___7/21/6̄_____

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Please find below and/or attached an Office communication concerning this application or proceeding.

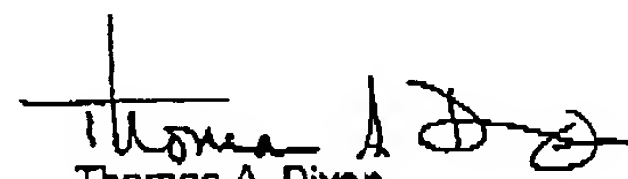| *Notification of Non-Compliant Appeal Brief* (37 CFR 41.37) | Application No. 10/652,640 | Applicant(s) ABE, JOHN R. | |
|---|---|---|---|
| | Examiner Thomas A. Dixon | Art Unit 3639 | |

*--The MAILING DATE of this communication appears on the cover sheet with the correspondence address--*

The Appeal Brief filed on <u>04 March 2006</u> is defective for failure to comply with one or more provisions of 37 CFR 41.37.

To avoid dismissal of the appeal, applicant must file an amended brief or other appropriate correction (see MPEP 1205.03) within **ONE MONTH or THIRTY DAYS** from the mailing date of this Notification, whichever is longer. **EXTENSIONS OF THIS TIME PERIOD MAY BE GRANTED UNDER 37 CFR 1.136.**

1. ☐ The brief does not contain the items required under 37 CFR 41.37(c), or the items are not under the proper heading or in the proper order.

2. ☐ The brief does not contain a statement of the status of all claims, (e.g., rejected, allowed, withdrawn, objected to, cancelled), or does not identify the appealed claims (37 CFR 41.37(c)(1)(iii)).

3. ☐ At least one amendment has been filed subsequent to the final rejection, and the brief does not contain a statement of the status of each such amendment (37 CFR 41.37(c)(1)(iv)).

4. ☒ (a) The brief does not contain a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, referring to the specification by page and line number and to the drawings, if any, by reference characters; and/or (b) the brief fails to: (1) identify, for each independent claim involved in the appeal and for each dependent claim argued separately, every means plus function and step plus function under 35 U.S.C. 112, sixth paragraph, and/or (2) set forth the structure, material, or acts described in the specification as corresponding to each claimed function with reference to the specification by page and line number, and to the drawings, if any, by reference characters (37 CFR 41.37(c)(1)(v)).

5. ☐ The brief does not contain a concise statement of each ground of rejection presented for review (37 CFR 41.37(c)(1)(vi))

6. ☐ The brief does not present an argument under a separate heading for each ground of rejection on appeal (37 CFR 41.37(c)(1)(vii)).

7. ☐ The brief does not contain a correct copy of the appealed claims as an appendix thereto (37 CFR 41.37(c)(1)(viii)).

8. ☐ The brief does not contain copies of the evidence submitted under 37 CFR 1.130, 1.131, or 1.132 or of any other evidence entered by the examiner **and relied upon by appellant in the appeal**, along with a statement setting forth where in the record that evidence was entered by the examiner, as an appendix thereto (37 CFR 41.37(c)(1)(ix)).

9. ☐ The brief does not contain copies of the decisions rendered by a court or the Board in the proceeding identified in the Related Appeals and Interferences section of the brief as an appendix thereto (37 CFR 41.37(c)(1)(x)).

10. ☒ Other (including any explanation in support of the above items):

   *1. Section V summary does not contain a summary for each dependent claim argued separately.*
   *2. Section X appendix is to contain decisions by the Board, not copies of all other appealed cases. .*

Thomas A. Dixon
Primary Examiner
Art Unit: 3639